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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,078	09/27/2003	Jose A Capote	11855/4	7484

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EXAMINER	
HERTZOG, ARDITH E	

ART UNIT	PAPER NUMBER
1754	

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/673,078	CAPOTE ET AL.	
	Examiner	Art Unit	
	Ardith E. Hertzog	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *12-27* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 January 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to the "First Amendment" filed January 12, 2006. Claims 12-27, per said amendment, are pending.

2. **All** objections to the drawings, as set forth in the prior Office action mailed October 11, 2005 (hereinafter "the 10/11/05 action"), have been **mooted** by the formal drawings accompanying applicant's amendment.

3. The 35 U.S.C. § 112, second paragraph, rejection of claims 14-17, as set forth in the 10/11/05 action, has been **overcome** by amendment.

4. Upon careful reconsideration, the 35 U.S.C. § 102(b) rejection of the claims based upon a public use or **sale** of the invention, as set forth in the 10/11/05 action, has been **withdrawn**. In accordance with MPEP § 2133.03, it is now seen that the instant **method** (process) claims **cannot** be properly so rejected, in light of Reference C2 cited on the information disclosure statement (IDS) filed November 10, 2004 (hereinafter "Reference C2"). In particular, MPEP § 2133.03 states, in relevant part:

> III. SALE OF A PROCESS
>
> A claimed process, which is a series of acts or steps, is not sold in the same sense as is a claimed product, device, or apparatus, which is a tangible item. "Know-how" describing what the process consists of and how the process should be carried out may be sold in the sense that the buyer acquires knowledge of the process and obtains the freedom to carry it out pursuant to the terms of the transaction. However, such a transaction is not a "sale" of the invention within the meaning of §102(b) because the process has not been carried out or performed as a result of the transaction." *In re Kollar*, 286 F.3d 1326, 1332, 62 USPQ2d 1425, 1429 (Fed. Cir. 2002). However, sale of a product made by the claimed

> process by the patentee or a licensee would constitute a sale of the process within the meaning of 35 U.S.C. § 102(b). See *id.* at 1333, 62 USPQ2d at 1429; *D.L. Auld Co. v. Chroma Graphics Corp.*, 714 F.2d 1144, 1147-48, 219 USPQ 13, 15-16 (Fed. Cir. 1983) (Even though the sale of a product made by a claimed method before the critical date did not reveal anything about the method to the public, the sale resulted in a "forfeiture" of any right to a patent to that method); *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1550, 220 USPQ 303, 310 (Fed. Cir. 1983). The application of 35 U.S.C. § 102(b) would also be triggered by actually performing the claimed process itself for consideration. See *Scaltech, Inc. v. Retec/Tetra, L.L.C.*, 269 F.3d 1321, 1328, 60 USPQ2d 1687, 1691(Fed. Cir. 2001) (Patent was held invalid under 35 U.S.C. § 102(b) based on patentee's offer to perform the claimed process for treating oil refinery waste more than one year before filing the patent application). Moreover, the sale of a device embodying a claimed process may trigger the on-sale bar. *Minton v. National Ass'n. of Securities Dealers, Inc.*, 336 F.3d 1373, 1378, 67 USPQ2d 1614, 1618 (Fed. Cir. 2003) (finding a fully operational computer program implementing and thus embodying the claimed method to trigger the on-sale bar). However, the sale of a prior art device different from that disclosed in a patent that is asserted after the critical date to be capable of performing the claimed method is not an on-sale bar of the process. *Poly-America LP v. GSE Lining Tech. Inc.*, 383 F.3d 1303, 1308-09, 72 USPQ2d 1685, 1688-89 (Fed. Cir. 2004) (stating that the transaction involving the sale of the prior art device did not involve a transaction of the claimed method but instead only a device different from that described in the patent for carrying out the claimed method, where the device was not used to practice the claimed method until well after the critical date, and where there was evidence that it was not even known whether the device could perform the claimed process).

That is, Reference C2, which "describes a waste treatment system that was quoted in Taiwan in September 2002" (see remarks accompanying IDS filed November 10, 2004) and—even more importantly—directed towards the "treatment of **solid** waste" (see remarks accompanying amendment at p. 8, third full paragraph, emphasis added), **cannot** be considered sufficient to establish that applicant's invention, as recited in the instant method claims, was the subject of "[a]n offer for sale, made or originating in this country" (see MPEP § 2133.03(d)) more than one year prior to September 27, 2003.

5. The 35 U.S.C. § 102(b) rejection of claims 12, 13 and 18 as anticipated by the *Plasma Sources Sci. Technol.* article entitled "Some plasma environmental technologies developed in Russia", by Rutberg, published August 2002 (hereinafter "Rutberg 2002") as set forth in the 10/11/05 action, has been **withdrawn**, in view of applicant's amendment and arguments. In particular, it is now seen that Rutberg 2002 does **not** teach an atomizing step, per instant independent claim 12, part (c), and instant independent claim 18, part (d).

6. **All** remaining prior art rejections of the claims based upon Rutberg 2002, as set forth in the 10/11/05 action, have been **modified**, as set forth below.

Claim Rejections - 35 U.S.C. § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 25-27 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. It is respectfully submitted that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. With respect to claims 25-26, it is not seen where the originally filed disclosures supports the recited limitations re the "act of dissociating the organic molecules of the gasified atomized liquid waste into elemental components"—rather, the specification discusses oxidation

and/or combustion which occurs **after** applicant's "dissociation" step (see especially paragraphs [0027]-[0029], [0030]-[0034] and [0046-[0050]; see also Figs. 2A-2B). With respect to claim 27, it is not seen where the originally filed disclosure supports the negative limitation recited therein. Appropriate correction is required.

9. It is noted for the record that remaining new claims 21-24 **are** considered supported by the originally filed disclosure—claim 21 being supported by, at the least, Figure 1; claim 22 being supported by, at the least, paragraph [0059] of the specification; and claims 23 and 24 being supported by, at the least, paragraph [0027] of the specification.

Claim Rejections - 35 U.S.C. § 103

10. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 12-18 and 21-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rutberg 2002 in view of previously cited US 4,886,001 (Chang et al., hereinafter "Chang"). Rutberg 2002 teaches treatment of liquid supertoxic substances, including hazardous solvents, per ***instant claims 13 and 18***, via low temperature plasma generators (AC plasmatrons), per ***instant independent claims 12 and 18*** (see Rutberg 2002 abstract and section 4.2 at pp. A163-A164, noting Fig. 6 and corresponding discussion at p. A163, col. 2, last full para.). Rutberg 2002 further

teaches plasma methods with syngas generation, per ***instant claims 14-16, 23 and 24*** (see Table I. at p. A159, as well as the second sentence in this article, wherein "plasma pyrolysis of waste with significant organic content" is specifically disclosed, and p. A163, col. 2, second full sentence, wherein carbon dioxide formation is disclosed). Note that such methods "are performed in the absence of coke," per ***instant claim 27***. With respect to ***instant claim 21***, it may be reasonably presumed that **at least some** of the plasma flame in the liquid waste treatment apparatus shown in Rutberg 2002 Figure 6, "projects upwardly from the AC plasma torch," as recited therein. With respect to ***instant claims 22 and 25-26***, Rutberg 2002 states:

> Introduction of combustible solvents into the plasma jet is designed to develop the ignition process of **hardly combustible and non-combustible** simulators [(i.e., use of an oxidizing agent is not required, per instant claim 22)]. Processes of combustion and gasification **can** occur in the primary furnace depending on the relationship of supplied fuel, air and water [(i.e., "dissociating... performed in part by combustion and in part by pyrolysis," per instant claims 25-26). (p. A163, col. 2, last full paragraph, emphasis added)

With respect to ***instant claim 17***, in the exemplary treatment of liquid waste (i.e., the discussion of Fig. 6 at pp. A163-A164), Rutberg 2002 teaches use of a filter for treatment of aerosol particles, per instant step (b), and additional treatment of the cleaned flue gases, prior to their ejection into the atmosphere, per instant step (c). Rutberg 2002 fails though, to disclose the **specific** temperature ranges required by instant step (a). **However**, Rutberg 2002 does teach cooling the flue gases—which are evidently initially at a temperature of 1400-1500°C—to a temperature of 380-400°C, followed by further cooling (see para. bridging pp. A163-A164). **Hence**, temperature ranges falling within the scope of ***instant claim 17*** would have been obvious to one of

ordinary skill in the art, at the time of applicant's invention, because, absent contrary evidence, determination of suitable **additional** temperature ranges for use in the methods of Rutberg 2002—beyond those **exemplified**—is considered to have been within the level of ordinary skill. That is, determination of appropriate processing temperatures for the syngas methods **generally** taught by Rutberg 2002 is considered to have been within the level of ordinary skill, absent contrary evidence. **Accordingly**, Rutberg 2002 teaches or would have rendered *prima facie* obvious all limitations of ***instant claims 12-18 and 21-27***, **with the exception of** atomizing the liquid waste, per ***instant independent claim 12***, ***part (c)***, and ***instant independent claim 18***, ***part (d)***. **However**, Rutberg 2002 does teach use of a "metering unit of liquid components" in the liquid waste treatment apparatus of Figure 6.

12. Chang teaches methods and apparatus for plasma pyrolysis of liquid waste, wherein "the feed [of liquid waste] is injected through a plurality of air atomizing nozzles" "[t]o expedite movement of the material through the system" (see col. 4, lines 12-14). **Accordingly**, it would have been obvious to one of ordinary skill in the art, at the time of applicant's invention, to have modified the "metering unit of liquid components" in the liquid waste treatment apparatus shown in Rutberg 2002 Figure 6 to include atomizing nozzle(s), because of the corresponding advantage taught by Chang—again, expedited movement of the liquid waste through the plasma pyrolysis apparatus.

13. Claims 19 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rutberg 2002 in view of Chang, as applied to claim 18 above, and further in view of WO 01/92784 (hereinafter "WO '784"). Rutberg 2002 and Chang are relied upon as

set forth above, having rendered instant claim 18 *prima facie* obvious. **However**, the "second source of hazardous liquid solvent waste" limitations of instant claims 19 and 20 are not disclosed by either Rutberg 2002 or Chang.

14. WO '784 teaches an apparatus adapted for processing liquid waste in a plasma torch based waste processing plant (see p. 1, first para.). In two separate embodiments, WO '784 teaches that multiple reservoirs (for the liquid waste) "may be required... when dealing with a range of liquid waste, including some liquids which may be explosive when brought together, and are thus fed separately (and possibly at different times) to the [(processing)] chamber..." (see p. 14, first para., as well as p. 16, full para.). **Thus**, it would have been obvious to one of ordinary skill in the art, at the time of applicant's invention, when having modified the Rutberg 2002 liquid waste treatment apparatus with the atomizing nozzles of Chang, to have **further** modified the corresponding methods to meet the "second source of hazardous liquid waste" limitations of instant claims 19 and 20, because, as just discussed, WO '784 teaches that such modifications may be necessary "when dealing with a range of liquid waste."

Response to Arguments

15. Applicant's remaining arguments with respect to all instant claims have been fully considered but are deemed moot in view of the new ground(s) of rejection.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. This reference is considered cumulative to or less material than those discussed above/already of record. Though not available as **prior** art, US 6,971,323 has been cited, since it corresponds to previously cited US 2005/0204969.

17. Any inquiry concerning this communication should be directed to Ardith E. Hertzog at 571-272-1347. The examiner can normally be reached on Monday through Friday (from about 7:30 a.m. - 3:30 p.m.).

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman, can be reached at 571-272-1358. The central fax number for all communications is now 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. For any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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AEH
March 22, 2006